



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,540	01/16/2004	Anna Kron		5593

7590 11/24/2006  
DAVID J. SERBIN  
1217 KING STREET  
ALEXANDRIA, VA 22314

EXAMINER

ZEMEL, IRINA SOPHIA

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/758,540

Applicant(s)

KRON ET AL.

Examiner

Irina S. Zemel

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9-14-2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

### DETAILED ACTION

The applicants should note that the claims currently presented for examination contain claim with either improper amendments or improper status identifier - when the claim contains underlining indicating current amendment, the claims can not have an identifier of *previously* amended.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,287,308 to Nakayama et al., (hereinafter "Nakayama") in combination with US Patent 4,255,307 to Miller, (hereinafter "Miller").

The rejection of claims 1- 20 stand as per reasons of record.

Insofar as the amendment to the "ethylenically unsaturated monomers" for the polymeric shell, the Nakayama discloses polymeric shells obtained from acrylonitrilles, which are ethylenically unsaturated monomers.

Insofar as limitations of claims 17 and 18, the claimed compounds are necessary products of reaction between the residual unreacted (meth)acrylonitrile monomers and the agents disclosed by Miller. Thus, once the substitution of the agents disclosed by Nkayama with the agents disclosed in Miller is done as for reasons expressly discussed in the previous office actions, the claimed compounds are necessarily and inherently present in the claimed microspheres.

The limitations of claim 21 are also met by the combined disclosure of the cited references. The limitation of the "expandable microspheres during the step of contacting them with the agent for reacting with residual monomers are in the form of an aqueous slurry or dispersion originating from a polymerisation mixture in which the microspheres have been produced" would have been obvious from the expressed disclosure of Nakayma that the reaction with the agent may be conducted at any stage before or after washing the microspheres (see column 3, lines 43-45), which process before washing inherently implies the claimed step. The step of "in situ" production of the agent is also inherently met when the compound used for the reaction is chosen from metabisulfites as expressly disclosed in Miller (column 4, lines 14-15).

The invention as claimed, thus, is still considered to have been obvious from the disclosure of the cited references.

### ***Claim Rejections - 35 USC § 102/103***

Claim 20 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakayama.

The rejection stands as per reasons of record.

### ***Response to Arguments***

Applicant's arguments filed 9-4-2006 and 7-17-2006 have been fully considered but they are not persuasive. The applicant's main argument is that is, as alleged by the examiner, "the problems of using sulfates or sulfides are well known, the evidence for non-obviousness of the present invention is certainly strengthened. It should be noted

Art Unit: 1711

that Nakayama et al has spent significant effort in finding a suitable way of preparing expandable microspheres with reduced amount of residual monomer and tested a large number of chemical substances, but come to the conclusion that sulfides are particularly preferred in spite of the well known problems of discoloration and bad smell. If the substances of Miller were believed to be suitable for treating expandable microspheres they would certainly have been disclosed in Nakayama et al in favor of the sulfides that according to the Examiner would be expected to be disadvantageous. Furthermore, as there is no hint whatsoever in Miller that the compounds disclosed therein would be suitable for treatment of expandable microspheres, a person of ordinary skill in the art would have no reason at all to believe so, particularly in view of the extensive work relating to microspheres already done by Nakayama et al. Accordingly, the Examiner has failed to establish a prima facie case of obviousness.

This argument is not found persuasive. It is irrelevant to the claimed invention whether one patentee, at the time he made his invention, considered insofar as the work of another patentee. It is also irrelevant what how much effort Nakayama put into his invention and what conclusion he arrived at, so long as this conclusion does not teach way from the claimed invention. It is also irrelevant whether teaching of Miller were known at the time Nakamura made his invention (by the way, it is quite plausible that Nakamura did not know about the invention of Miller since Nakamura's invention was filed prior to publication of Millers invention. The relevant question is what would have been obvious for an ordinary artisan at the time the instant invention was filed. At that time, both cited references were in public domain and, as discussed in the previous

Art Unit: 1711

office actions, one of ordinary skill in the art would have arrived to the claimed invention from the teachings of the cited references with reasonable expectation of success.

Insofar as the arguments regarding the limitations of claims 17 and 18, applicants attention is drawn to the discussion above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ISZ

Irina S. Zemel  
Primary Examiner  
Art Unit 1711

